

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001954**Date Inspected:** 31-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng, Ye Yong Jun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Mock up**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**Bay 1**

The Quality Assurance Inspector was assigned to monitor activities within Bay 1. The Quality Assurance Inspector observed ZPMC squaring the length of closed ribs on the milling machine. Eight ribs were stacked and being milled simultaneously. The Quality Assurance Inspector measured the ribs to be approximately eight meters in length, 12 millimeters in thickness and 790 millimeters in width. The Quality Assurance Inspector observed ZPMC drilling bolt holes in the closed ribs. ZPMC was observed beveling closed ribs in preparation for the partial joint penetration connection to the deck plate. ZPMC Quality Control would measure the bevel angle and record the values on the closed rib.

**Gantry 1**

The Quality Assurance Inspector witnessed the Production Monitoring Tests for Deck Panels DP-163-001 and DP-190-001 performed on gantry 2. The parameters appeared to be within welding procedure specification for dual process WPS-B-T-2342-U1 (U-rib)-3. All parameters and welders were recorded in an onsite log for future review. Upon Completion ZPMC performed visual examination and relayed it was acceptable. The Quality Assurance Inspector performed Visual Verification and the 6 welds appeared to meet the contract requirements. ZPMC then performed Ultrasonic verification and relayed it was acceptable.

The Quality Assurance Inspector witnessed the welding of the production panels DP-163-001 and DP-190-001.

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## WELDING INSPECTION REPORT

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The parameters appeared to be within welding procedure specification for dual process WPS-B-T-2342-U1 (U-rib)-3. All parameters and welders were recorded in an onsite log for future review. The ambient temperature in bay # 1 was recorded at 15 degrees Celsius with the production panel temperature recorded at 16 degrees Celsius prior to welding.

### Gantry 2

The Quality Assurance Inspector witnessed the Production Monitoring Tests for Deck Panel DP-162-001. ZPMC only performed one production monitoring test weld due to only one weld needed to be welded on the above referenced production panel. On the previous day the submerged arc welding cover pass was not completed on weld number 1 due to ZPMC running out of wire. The parameters appeared to be within welding procedure specification for dual process WPS-B-T-2342-U1 (U-rib)-3. All parameters and welders were recorded in an onsite log for future review. Upon Completion ZPMC performed visual examination and relayed it was acceptable.

The Quality Assurance Inspector performed Visual Verification and the 1 weld appeared to meet the contract requirements. ZPMC then performed Ultrasonic verification and relayed it was acceptable. The Quality Assurance Inspector witnessed the welding of the production panels DP-162-001 weld 1. On this date only the submerged arc welding pass needed to be completed. The parameters appeared to be within welding procedure specification for dual process WPS-B-T-2342-U1 (U-rib)-3. All parameters and welders were recorded in an onsite log for future review. The ambient temperature in bay # 1 was recorded at 15 degrees Celsius with the production panel temperature recorded at 16 degrees Celsius prior to welding.

### Summary of Conversations:

As stated in the contents of the above report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry, 916 227-5719, who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Bertlesman,Greg | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Cuellar,Robert  | QA Reviewer                 |

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